



April 1994

Commodore Users Group of Saskatchewan

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The Monitor is published monthly by the Commodore User's Group of Saskatchewan (UGS). Meetings are held on the first Wednesday of every month in Miller High School's cafeteria annex, unless otherwise noted. The next meeting will be held on May 4, 1993 from 7:30 to 9:30 P.M.

UGS is a nonprofit organization comprised of 64 and 128 users interested in sharing ideas,

programs, knowledge, problems, and solutions with each other. Membership dues (\$15) are pro-rated, based on a January to December year. An additional \$5 will be charged for members wishing their newsletters to be mailed to them.

Anyone interested in computing is welcome to attend any meeting. Members are encouraged to submit public domain and shareware software for inclusion in the CUGS Disk Library. These programs are made available to members at \$3.00 each (discounted prices when buying bulk). Since some programs on the disks are from magazines, individual members are responsible for deleting any program that they are not entitled to by law (you must be the owner of the magazine in which the original program was printed). To the best of our knowledge, all such programs are identified in their listings.

Other benefits of club membership include access to our disk copying service to make backups of copy-protected software, and any members who own a modem and wish to call our bulletin board will receive increased access to the message and file areas. The board operates at 300 to 2400 baud, 24 hours a day.

the MONITOR

THIS MEETING:
Role-Playing Games



Executives' Ramblings...

Salutations, faithful Commodore fans. I am pleased to say that our wonderful *Monitor* has now recovered from its temporary slump and is back on its feet, bringing you its monthly digest of Commodore news and advice. I am pleased to see people are finally submitting articles again. A big thanks to Keith Kasha for his effort to bring us Lou Sanders' tips from the old Commodore Magazine, and to Stan Mustatia for his contribution.

I trust everybody had enjoyed their Easter holiday. I know I have—I spent the time doing a little extra work on the bulletin board. Though we *still* do not have the file area available, I have installed some games to keep you people occupied until they are all programmed in. :) Try the new *Little Shop of Horrors* and *Fire!* games, accessible from the MODules menu. The files will come, yes, sooner or later. At this very moment our executive staff is working on the sorting process, so as to make the files much easier to find for our users, unlike their previous organization, which was somewhat chaotic.

I'll now transfer you over to Keith, who has a word or two on the CP/M library. Remember to keep those articles coming in and our newsletter will continue to maintain its high standards of quality for our members.

-Ed.

* * *

So here we are, another month, another article. So let's see what's new, or shall I say, what's old. Been reminiscing again. Seem to be doing a lot of that lately. (Hmmm...I wonder if that's a sign?) Got to thinking that since the *Monitor's* running little lean these days (isn't everyone?), and seeing I'm on the executive again, and since this time's it's to do with the

Monitor... It's time to try writing a column again. I know, I know! I tried that once and I lost momentum, but since I'm in the mood to do it, better get it while the gettin's good, I always say. So here goes: I'm going to type in some of the Tips & Tricks articles from the Commodore mags I got kicking around here and submit them to the *Monitor* from time to time. Who knows? Maybe I'll actually keep up the momentum?

OK, time to put on my other hat now! If you'll remember, a few months ago I did a demo on CP/M. So, what more fitting to talk about than, you guessed, the CP/M Library!

Hang on, you say, the club only has 4 CP/M disks, and 4 disks a library doesn't make. 'Tis true, 'tis true. But, what you may not know, but are now going to find out, is that the club has received a donation of CP/M software! Perry Grodzinski -- whom some of you might remember did a demo last year on building hardware projects for the C64, such as a DataPump (a Swiftlink RS232C cartridge clone) and a 1-2 meg REU -- has graciously donated a large amount of CP/M software, most pre-configured to run on the C128! Thanx, Perry!

So now we have enough CP/M software to set up some sections: Games, Utilities, Communications and Business, for starters. Plus a special "System" section with and the disks you'll need to get CP/M running on your C128. If you have a C64, don't despair. The plans to build a CP/M cartridge for the C64 are available, and over the next month or two I'll be hunting them down and making them available to club members! Plus lots more software! So until next month, get into the library and let the library get into you! Check it out!



Speedscript 64 & 128

Stan Mustatia

Do you need to write a book report on *The Taming of the Shrew* for English class? Maybe the boss wants a progress assessment on that tough project you have been slaving over. Aunt Jill wants to have that recipe for rhubarb/dill pickle pie you are so famous for. Whatever the reason, the place to do all of the above is on your computer. Yes, that thing in the corner of the family room, with the joystick plugged into port 2. The Commodore 8-bit that you play all those neat games on is perfectly capable of producing many good reports and letters. Now if only you had a program to do all that in a nice presentable manner.

Don't look any farther than the CUGS disk library to find what you want. We have several word processing programs ranging from electronic typewriters to full-featured word processors with extensive editing routines. Speedscript for both the 64 and 128 is one of the latter. Speedscript has had a very long and illustrious life. It was first published in *COMPUTE!'s Gazette* in 1984. Since then, there have been various versions of the program, as well as many auxiliary programs to work with Speedscript. It is the most recent 64/128 versions that I will deal with in this article.

The 64 version has a capacity for 43K of text, or about 20-40 pages. The 128 version has room for 51K of text. In either version, the available free text space can be checked by simply pressing CTRL-#. The number that appears on the command line in the upper left side of the screen is the space left for the numbers of characters, including spaces between words and punctuation. Most of Speedscript's commands are accessed by just a key press or key combination, as seen above.

Unlike the typewriter, one doesn't have to enter a carriage return at the end of each

line. The program uses what is referred to as *word wrap*. This is to say, if a word is too long to fit at the end of the line, it is carried down to the beginning of the next line. Hard returns are only used at the end of paragraphs, or to limit the length of a line.

To start a paragraph in Speedscript, you can use the RUN/STOP key on the 64, or the tab key on the 128 as well as some other key combinations to indent a line 5 spaces. Very handy indeed. There is an insert mode to go back in your document and insert missed spaces, letters, or entire phrases that were left out inadvertently. In the same vein, one very good feature is the *search and replace* feature. Using various commands available at just a key press, you can utilize a very powerful feature. You can *hunt* (SHIFT-CTRL-H) for a word or phrase up to 29 characters long. With SHIFT-CTRL-J you can select a word or phrase to *replace*. Once you have located the work in question to be replaced, press CTRL-J without the shift to actually replace the word/phrase with the new one. Press CTRL-H alone to continue on to the next occurrence of the same word/phrase until you are done, or the message "NOT FOUND" is displayed on the screen. This simply means that from the cursor until the end of the document there are no more occurrences of the desired word. An even quicker way to do this function is to link CTRL-H and CTRL-J by pressing CTRL-G. The screen will first ask "Hunt for?", and then "Replace with?". After that, everything is automatic. Be careful when using CTRL-G, because sometimes a word you are looking for might be small enough to be imbedded in another word, and would be replaced in that word also. One last thing to remember is that this function can tell the difference between cases. It would replace the word 'last', but not the



word 'Last'.

When it's time to print your docs, a new set of commands are at your beck and call. It is here that your text can be formatted to a particular border size and headers and footers can be entered at the top and bottom of each page. Page numbering can be introduced. Speedscript will skip over perforations in the paper, or wait for you to put another sheet in the printer. You can set the length and width of the page, single, double, or triple space your lines. Linking files together to make one huge document is possible. You can even access your printer's unique special features using your printer codes for underlining, boldface, double wide, etc. You can even print to the screen with SHIFT-CTRL-P to preview exactly what you would see on paper. After issuing the command, press S or D. When you choose D, you send the document to disk as a SEquential file. This makes it easy for other word processors that save documents this way to read your Speedscript files. [A handy feature to use when submitting articles on disk or over the modem... -Ed.]

Possibly the most impressive feature for me would have to be the extensive formatting commands in the program. You can customize the program to define keys to perform printer functions, or even leave yourself notes that won't show up when your file is sent to the printer. Single lines can be formatted by imbedding commands on the line you want formatted. CTRL-U at the beginning and end of a particular word will underline it, for one example.

Speedscript 128 is similar to the 64 version. Version 128 is used in 80 column mode. The 64 version can be previewed in 80 columns. Also on the 128, the expanded keyboard is used. The escape key is used to insert text in *insert mode*. The tab, Caps Lock, ALT, and the numeric

pad are all active in the 128 mode. CTRL-4 will list a disk directory. Use No Scroll and RUN/STOP to control the listing of the directory. Drives 8 and 9 can both be accessed to chain files.

When you first load Speedscript 128, one of the first things to notice is the command line. This is now a format ruler to help you line up text and decimal points. Pressing the ALT and HELP keys together will give a graphic display of justification, line spacing, and header/footer info. The ruler also shows the margin and tab locations. Press any key to return to a normal text screen.

Full justification is now allowed, which means that the text is spaced so that the text along the margin is smooth, much like in a newspaper column. Speedscript 128 also supports three kinds of tab stops: left aligned, right aligned, and decimal. Headers and footers can be formatted independently from your regular text. You can even have multiple line headers and footers, with different justification for each line. Headers, including formatting codes, can be up to 256 bytes long. Header text can be separated into the right, left, and center justification on one line if you wish. This is great for titles and dates, etc.

I have only scratched the surface of what this program can do. For the best results, and to get used to the commands, experiment. Find yourself a copy of COMPUTE!'s *Gazette* May 1987 for the complete story on Speedscript 64. COMPUTE!'s *Gazette* October 1987 and September 1989 will be most helpful in learning the 128 and 128+ versions. I think you'll discover just how good a program you really have, at a most reasonable price as you can ask for. As you will see, there are many such useful applications in the CUGS library, waiting for someone like you to put them to good use.



Tips & Tricks

Reprinted from Commodore Magazine,
Volume 8, Number 3, March 1987.
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Tips & Tricks

Hints for Fun and Utility

Compiled by Louis F. Sander

Every month, we bring you a super collection of computer hints from readers all over the world. No matter what your area of interest or level of expertise, you'll find something to make your computer life more productive, more interesting or more exciting. To keep the column flowing, we solicit your short programs, useful programming techniques, computer room hints, and similar items of interest, and we pay up to \$50 for the items we select. We look for new or recycled material that can be implemented with a minimum of time, effort and theoretical knowledge, and that is of current value to Commodore computerists of every kind. If you have an item that fits the bill, send it to:

Louis F. Sander
P.O. Box 101011
Pittsburgh, PA 15237

If you enclose a self-addressed stamped envelope, we'll send you our hint-writer's guide. Readers outside the U.S. may omit the stamp.

[Editors note: Commodore Magazine is no longer in publication and, thus, this column no longer exists. Any tips & tricks sent to Louis F. Sanders will more than likely not appear in a magazine column and you will not be paid for them.]

Learning about computing: One of the best ways to increase your computer knowledge is to go to meetings and conventions where there are other people with interests similar

Keith Kasha

to yours. Most cities have at least one Commodore user group, and attending their meetings can put you in touch with some valuable computer friends.

Even more beneficial are the large Commodore conventions conducted by such groups as the West Coast Commodore Association. Manufacturers, publishers and software houses exhibit at these shows, and at their booths you can see their latest products and talk with people who are really in the know. Usually there are educational lectures as well, where you can learn about specific topics that interest you, and ask questions that only the experts can answer.

One of the best parts of these shows is the chance to meet the people whose work you've seen in print or on-line. At one show, I got to speak with Louis F. Sanders, Jim Butterfield, Len Lindsay, Louis Wallace and several others whose articles and programs I've loved. I also met on-line personalities like QuantumLink's MISS CHRIS and BILL P1, and other notables like Commodore's Jim Gracely. All in all, attending that convention was one of the most exciting things I've ever done, and I recommend such shows highly to everyone.

Becky Cassell
Glendale, California

Easy printer stand: You can make a very useful printer stand from one of the desks trays sold at office supply houses and discount stores. Turn the tray upside down, with its opening toward the rear, and set your printer on top of it. Your paper will fit in the space between the desk and the top of the "printer stand" (really the bottom of the desk tray), and can be fed out of the opening and up the back of the printer.

These trays are available in a wide variety of colors, shapes and sizes, so you



should be able to find one exactly right for your needs. The better brands come in legal and data processing sizes; the data processing size is ideal for wide-carriage printers.

Robert L. Sander
Saddle Brook, New Jersey

Double-spaced listings: When printing program listings on your printer, it's often desirable to print then double-spaced. The extra white space makes it easier to follow the program and provides a place for notes and changes.

You can easily get these double-spaced listings by giving your printer file a number higher than 127. For example, `OPEN128,4:CMD128:LIST` will produce a double-spaced listing on the printer. When the printing has stopped, reset the printer by executing `PRINT#128:CLOSE128`.

Anna Mae Hertzler
Boynton Beach, Florida

Printer DIP switches: if you use a non-Commodore printer and interface with your system, both of these units is likely to have several tiny switches that must be set properly for everything to work right. They're called DIP switches (after the integrated circuit Dual Inline Package standard that their size and contacts conform to), and you can set them with a pen point or other similar instrument. Because DIP switches are so important, some words of explanation are in order.

DIP switches configure your equipment for different types of operation by determining such things as number of characters per inch, number of spaces skipped between lines, and so on. The switch settings almost always have their effect when power is first applied to the printer or interface, so if you change them you must turn things off and back on before the changes take effect. And almost

always, the DIP switches merely establish defaults; software commands can change the parameters they control. Such commands are usually given by sending special control characters or escape sequences to the printer.

Many printing irregularities are the fault of improper DIP switch settings. These settings are always covered in the instruction manual, but are seldom explained in detail. Usually there is a simple chart with very brief descriptions of each setting. To use your system effectively, you should have perfect understanding of these settings. If you can't understand them show your manual to a friend who's knowledgeable.

If both a printer and an interface are involved, you must coordinate the settings of the switches on both units. For example, both will frequently have DIP switches with identical functions, such as adding a linefeed after a carriage return. If your not careful, you could get two linefeeds.

Similarly, you must coordinate your DIP switch settings with the default settings of the software you're using with the printer/interface combination. Getting three spaces between lines? Most likely the software, interface and printer are each adding one!

Kathleen Mead
Westerville, Ohio

QuantumLink file append: During a Q-Link on-line session, I often make several disk saves of incoming information. Instead of choosing a unique filename for each of these saves, I give the first one a very simple name, such as `FILE`. For subsequent saves on the same session, I use the filename `FILE,A`. The comma and the A cause new information to be appended to the end of the previously created file, and I can append as many times as I want to.

When I later want to review the information I have saved, I only need to



remember one filename -- FILE. I can use my word processor to edit it or break it down into different documents.

If you wanted to get fancy, you could use a more descriptive filename, perhaps including the date. FILE3/15/87 or QFILE3/15/87, though more difficult to remember, are much more self-descriptive when seen in a directory.

Ranjan Bose
Winnipeg, Canada

Disk library tips: Most experienced computerists have developed certain systems and procedures for keeping track of their disks.

If you can avoid it, never give to disks the same ID, since some programs can become confused by duplicates. A good system is to assign ID's in a regular alphabetical sequence: AA, AB, AC, AD, and so on. Wherever you keep your disks, if you also keep a card that shows the ID's you've assigned to date, you'll easily be able to avoid duplicates.

Reserving certain disks for certain categories of programs often makes it easier to find what you're looking for. Common categories are utilities, sound and music, games, and word processing files.

Put your most-frequently-used program first on the disk where it can be loaded by LOAD"*,8 or a similar command.

Don't try to use all the space on a disk, since you need space to update programs and data. Leaving 50-100 blocks free is wonderful insurance against overflow.

Keep one or two disks on hand exclusively for use in program development. As you work on new programs, save all your intermediate versions to one of these disks. Then when a program is finalized, put it on a different disk and erase all the previous versions. This saves wear and tear on your good disks, and lessens the chance that you'll ruin one of them.

Print out each disk's directory, and keep the hard copy close to the disk itself. Some people tape it to the disk envelope, while others keep it inside the envelope. Use this procedure to make the printed directory.

LOAD"*,8<RETURN>

OPEN4,4:CMD4:LIST<RETURN>

Wait for the printer to finish, then type

PRINT#4:CLOSE4<RETURN>

Remember, the only legal abbreviation for PRINT# is P shift R.

Louis F. Sander
Pittsburgh, Pennsylvania

Screen marking hint: The special marking pens made for overhead projector transparencies are perfect for making temporary markings on your CRT screen. Their ink adheres nicely to the glass and is easily removed with a damp cloth. The Vis-a Vis(tm) brand, made by Sanford, is available at any large office supply store in extra fine, fine and broad points.

Lucy S. Terrier
Alton, Illinois

TV interference: If you use a TV set rather than a monitor for your video display, you might have trouble with wavy lines on your screen. The key to eliminating them lies in the cable that connects the computer to the TV. It should be in good condition and totally shielded if possible. If your TV is set up for 300 ohm twin-lead, you should have a 75-300 ohm coupler between the terminals and your computer cable. It's often useful to coil the cable and tape it in place. It usually helps if you take the TV/computer switch box out of the circuit, or use some other method to remove the TV antenna connection whenever you're computing.

Radio Shack and similar stores have a wide array of connectors, cables, switches and filters for TV and video connections. The store manager should be willing to



make some suggestions.

Harry Menhorn

Ross Township, Pennsylvania

Dead C128: If your C128 behaves as though it is dead, you've likely blown one of the two fuses in the power supply. If the computer doesn't do anything when you turn it on, the culprit may be the 4A 125V fuse inside the power supply. Be sure to unplug everything before disassembling the unit, and be careful what you touch -- the internal capacitors can hold a pretty shocking charge! If you turn on the computer and the drive and printer initialize but nothing else works, replace the 1.6A 250V fuse which is easily accessible from the bottom of the power supply.

Al White

Lufkin, Texas

Note: Opening your power supply voids your warranty.

BASIC abbreviations: Your user manual lists short abbreviations for most of the BASIC keywords. Here's a summary of useful information about them.

The abbreviations are nothing more than a convenient way of entering statements from the keyboard. They don't save memory, even though they look like they should.

In addition to saving keystrokes, their greatest use is in squeezing extra keywords onto a screen line. For example, the C64's screen editor limits line entries to 80 characters. If you abbreviate keywords, you can get more of them into the line. The principle works on other Commodore computers as well, whether the screen editor limit is 80 characters or something different.

When you list a line that includes abbreviated keywords, the computer expands them to their fully spelled form.

This can make the listed line longer than the screen editor's limit, but the line will still work perfectly. The thing you can't do is edit a line longer than the screen editor's limit; if changes to such a line are needed, you must enter it again from scratch.

You can avoid having to retype an abbreviated line, by making up a dummy line. Number the dummy so it will never be executed, and use a quotation mark as the first character after the line number. Then type your regular program statements including abbreviations. Then list the dummy, which because of the leading quotation mark will include the abbreviations rather than their expansions, and will therefore not exceed the screen editor's limits. Change its line number to the one you want the actual line to have, delete the leading quotation mark, then press RETURN. List the line you've just entered, and observe the abbreviations have been expanded. If you need to edit this line, list the dummy again, change the line number and delete the leading quote. Then edit the rest of the line and press RETURN to enter it.

It's easier to work with abbreviations if the computer is in upper/lower case mode, since the abbreviations then won't contain hard-to-read graphics. You can put your machine into this mode by simultaneously pressing the SHIFT and Commodore keys.

The proper abbreviations for PRINT# is P shift R. If you try to use ?#, the resulting line number will look all right, but will give a syntax error when executed. Similar restrictions apply to GET# and INPUT#.

Jonathan Greer

Tyrane, Pennsylvania

Abbreviating zero: When a variable is assigned the value zero, such as in the statement N=0, you can replace the zero character with a decimal point. The computer will interpret the decimal point as

System Name	Number	BPS	Protocol	SW	CPU	Nets	Flags
Adult Superboard	789-8682	14.4	3b,4b	PB	P	F	1\$
Alpha Colony II	545-8342	14.4	3b,4b	Su	P	FW	
Atmospheric Environ.	780-6049	9600	3,M	WC	P		\$
Arboria	584-8610	1200	None	CB	C		
Beach House	729-4185	2400	None	Vi	P	FV	Q
Crystal Visions	586-6790	2400	None	RA	P	F	
C.U.G.S.	586-6608	2400	None	CB	C		
DataForce	585-1958	14.4	H,4b	RA	P	F	BQ1
Digital Underground	585-6077	9600	3	WC	P	FL	
Dispatch	565-6162	14.4	3b,4b	Su	P	FL	B
DLC-West <Hi Speed>	352-9390	16.8	H,3b,4b	--	P	F	\$
DLC-West	352-9378	2400	None	--	P	F	L\$
Double Check	525-0807	16.8	H,3b,4b	SN	A	F	Q1
Eden	584-7062	2400	None	RA	P	L	
Excalibur	949-8605	14.4	3b,4b	Gh	W		
Extreme Outer Limits	545-0417	19.2	Z,3b,4b	WC	P	FW	Q
FACT	924-8776	2400	None	WC	P	F	LQ\$
Fernando's Retreat	585-0298	9600	H	Op	P	F	B
Fourth Floor	352-0472	14.4	3b,4b	Sy	P	F	Q
Green Zone	789-7652	14.4	H,3b,4b	Mx	O	FI	Q2
Holistic	789-9909	14.4	3b,4b	TB	P	F	Q
IEEE South Sask.	586-1939	9600	3	RA	P	F	B
Impossible Missions	569-9705	2400	None	Tr	P	FW	
Kethas *	585-3819	14.4	3b,4b	RA	P	AL	
Mageholm	522-9816	14.4	3b,4b	RB	O		
Micro City <Hi Speed>	791-3388	14.4	3b,4b	Ma	P	JR	\$
Micro City	757-0088	2400	None	Ma	P	JR	\$
NEBBS II	775-1437	14.4	3b,4b	TA	A	F	Q
Missing Link I	775-1511	14.4	H,3,4b	PB	P		
Missing Link II	775-1512	14.4	H,3,4b	PB	P		
No Quarter	584-7428	14.4	3b,4b	TR	P	FW	Q
Pool Hall I	586-8490	9600	H,4b	PB	P		1
Pool Hall II	586-0922	14.4	H,4b	PB	P		
Q-COM Data Services	584-2916	2400	None	LN	P		
Ronchy's Pleasure Dome	949-8486	16.8	H,3b,4b	*RA*	P	BFI	B1\$
Sage's Den	545-2943	14.4	3b,4b	DL	A	F	Q
Shadowland	789-1899	14.4	3b,4b	RA	P	F	
Shareware Superboard	789-8690	14.4	3b,4b	PB	P	F	1
Short Circuit	751-0604	9600	3,4b	RA	P		
Skywatch	569-0581	14.4	3b,4b	TR	P		Q
Snake Pit	924-0773	14.4	3b,4b	Su	P	FRW	B
TeeWunKay	779-1237	14.4	H,3	Mx	O	FI	Q
Tempest Town	751-0622	14.4	H,3b,4b	Su	P	FW	1
Titan's Realm	949-8692	16.8	Z,3b,4b	Mx	P	F	Q
Tower of High Sorcery	545-0801	14.4	3b,4b	Vi	P	FW	
TTL Computer Concepts	522-3233	16.8	H,3b,4b	RA	P		B
Unibase	789-0709	9600	3,4b	--	U	U	\$
USS Galifrey	949-6032	14.4	H,3b,4b	RA	P	FT	BQ1

Total Systems: 42
Systems with a * before phone number are NEW entries

SW Definitions: CB - C*Base DL - DLG PB - PC Board PW - PowerBBS TA - TransAmiga TB - TBBS Gh - Ghost
LN - LNA Ma - MajorBBS Mx - Maximus Op - Opus RA - RemoteAccess RB - RBBS/PC RF - RoboBoard/FX
WV - WWIV Su - SuperBBS Sy - SynchroNet TR - TriBBS Tr - Turboard Vi - Virtual WC - WildCat
CPU Definitions: A - Amiga U - Unix C - C64/128 O - OS/2 P - MS-DOS W - Windows 3.1
Other Flags: \$ - Pay B - BlueWave Q - QWK X - Silver Express L - Rotary Switch 1 - 1200bps min
2 - 2400bps min 7 - 7,E,1 modem settings 9 - 9600bps min
Networks: A - AdultNet B - RoboNet F - FidoNet I - IBMnet J - MajorNet L - LA Link R - RIME U - Usenet
V - VirtualNet W - INTERWARnet Z - ZyxelNet



zero and will evaluate the expression significantly faster than if you had used the zero.

The trick works in direct mode as well, where it is especially useful in POKE statements. If you want to poke a zero into location 53281, for example, you can type POKE 53281, -- which is easier to type than POKE 53281,0.

You can use this trick wherever a zero is needed by itself, but not when the zero is part of another number, such as 200.

Robert Louis
Saddle Brook, New Jersey

Easy RUN: If you have a program in memory, you can run it very easily by simultaneously pressing the spacebar, SHIFT key and question mark key. Another easy way is to type in any letter or letters (not numbers or other characters), then simultaneously press SHIFT and RUN/STOP.

Greg Heide
Great Falls, Montana

INT hints: Many BASIC statements and functions automatically perform an INT as an early step in their processing, and in those cases, an INT in your program may be unnecessary. Here are some that I've run across in my experiments:

Array Subscripts	MID\$
CHR\$	PEEK
DIM	POKE
GOSUB	RIGHT\$
GOTO	SPC
LEFT\$	TAB

Also, you can often eliminate the need for an INT by using an integer variable, as shown by the following, in which A% is shown to have a value of 3.

```
100 A% = 10/3
110 PRINT A%
```

A. W. Grym
Oxford, England

Hope you like the first installment. I'll have another typed for a future Monitor, and if I get ambitious, a Gold Mine article, too.

- Keith Kasha

* * *

NEW LIBRARY DISKS

The 1993 Income Tax Disk by Earl Brown is the new program disk donated to the library each year from Earl to help you do your income taxes. Included on this year's disk are three programs; the general form for those of you who might be claiming children, donations, interest, and business expenses, to name a few; the special form for those with just the basic claims of a single person with the normal deductions; and a special form this year for those making a low amount of taxable income, but making a claim. The programs are easy to follow. Just answer the questions and let the program do the calculations.

CUGS BU01,02
inventory
checkbook64 v1.2
parrot dial-64m
formgen
ledger check
money manager
bank recon

CUGS ED01,04
sign language
astronomy
orbit elements
math64
metr-eng
storybook64

CUGS GEOS 22
geostripper
geos disk editor
da-runner
geoslides
geoinvaders
customizer
autoset
paintview III

-Stan Mustatia